CALIFORNIA STATE DEPARTMENT OF PUBLIC HEALTH
WALTER M. DICKIE, M.D., Director

Weekly Bulletin

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Program

Health Officers' Section—League of California Municipalities, Santa Monica, September 9-10, 1936

ELECTED OFFICERS

C. M. BURCHFIEL, M.D.____________President
Santa Clara County Health Officer

GEORGE M. STEVENS, M.D.____________1st Vice President
Los Angeles City Health Department

GEORGE H. ROTH, M.D.____________2d Vice President
Los Angeles County Health Department

WALTER M. DICKIE, M.D.____________Secretary-Treasurer
State Director of Public Health

Wednesday—September 9

Deauville Club, Santa Monica

9:00 a.m.—Registration.

9:30 a.m.—General Session. League of California Municipalities.

2:00 p.m.—Presiding: Dr. C. M. Burchfiel, President Health Officers' Section.

Address of Welcome, Honorable Frank L. Shaw, Mayor, City of Los Angeles.

President's Address, Dr. C. M. Burchfiel, Santa Clara County Health Officer.

1. Public Health in California.
   Dr. Walter M. Dickie, Director, California State Department of Public Health.
2. The Social Security Act in Relation to the Health Department—Surgeon Fred T. Foard, U. S. Public Health Service.
3. California Child and Maternal Program under the Social Security Act—Dr. Ellen S. Stadtmuller, Chief, Bureau of Child Hygiene, State Department of Public Health.
   Dr. R. C. Main, Santa Barbara County Health Officer, Discussant.
4. The California Crippled Children Program under the Social Security Act—Miss Janet Margaret Wood, in Charge, Crippled Children Program, State Department of Public Health.
   Dr. H. D. Barnard, Orthopedic Consultant, State Board of Public Health, Discussant.

Thursday—September 10

Deauville Club, Santa Monica

9:00 a.m.—Presiding: Dr. I. O. Church, Alameda County Health Officer.

1. The Next Steps in Public Health—Dr. George Parrish, Los Angeles City Health Officer.
   Dr. George H. Kress, Member, California State Board of Public Health, Discussant.
2. Specialized and Generalized Public Health Nursing Service in Departments of Public Health—Miss Ernestine Schwab, Director, Division of Field Nursing, Department of Public Health, San Francisco.
   Dr. Wilton L. Halverson, Pasadena City Health Officer, Discussant.
3. Nutrition in Relation to Public Health—Miss Ilma Lucas, Nutritionist, California Dairy Council.
   Mrs. Edythe Tate Thompson, Chief, Bureau of Tuberculosis, California State Department of Public Health, Discussant.
4. Venereal Diseases—Dr. George M. Stevens, Epidemiologist, Los Angeles City Health Department.
   Dr. Lee A. Stone, Madera County Health Officer, Discussant.
5. The Use of Immuno-Biologic Principles in the Prevention and Control of Civilization Diseases—Dr. Karl F. Meyer, Director, Hooper Foundation for Medical Research.

Thursday—September 10

Deauville Club, Santa Monica

2:00 p.m.—Presiding: Dr. Warren F. Fox, Imperial County Health Officer.

1. A Review of Twenty Years' Experience in County Health

Work—Dr. J. L. Pomeroy, Los Angeles County Health Officer.

2. An Original Method for Differentiation of Staphylococci Involved in Food Poisoning—Dr. R. V. Stone, Director, Bureau of Laboratories, Los Angeles County Health Department.
   Dr. W. H. Kellogg, Chief, Division of Laboratories, State Department of Public Health, Discussant.
3. Sanitation in the Mountain Area—Mr. Frank M. Stead, Sanitary Engineer, Los Angeles County Health Department.
   Mr. C. G. Gillespie, Chief, Bureau of Sanitary Engineering, State Department of Public Health, Discussant.
4. The Epidemiology of Tuberculosis—The Health Officer's Opportunity—Dr. Reginald H. Smart, Consultant on Tuberculosis, Los Angeles County Health Department.
   Dr. K. H. Sutherland, Orange County Health Officer, Discussant.
5. The Training of Sanitarians as Health Personnel—Mr. W. S. Mangold, Sanitary Inspector, Los Angeles County Health Department.

4:20 p.m.—Business Meeting.

Report of Resolutions Committee.
Report of Secretary-Treasurer, Dr. W. M. Dickie.
Report of League Director, Dr. H. F. True.
Election of Officers.

6:30 p.m.—Banquet at Grand Hotel, Santa Monica—Speaker, Dr. Robert Gordon Sproul, President, University of California.

PUBLIC HEALTH NURSE'S EXAMINATION ANNOUNCED

The State Division of Personnel has announced examinations for field nurses and for supervising public health nurse to be held September 19. Applications must be filed by September 12 with the State Division of Personnel at Sacramento.

SANITATION IN THE MOUNTAINS

The Bureau of Sanitary Engineering, during July, made a rapid check on general sanitation in recreational areas and in the mountainous districts, particularly in San Bernardino County, San Jacinto Mountains and the east side of the Sierra Nevada from Lone Pine to Lake Tahoe. While it is certain that the public respects the importance of clean streams and playgrounds it is evident that more water-flushed plumbing should be installed. With water-flushed systems cesspool disposal is the rule. A new problem that has sprung up comes from the present popularity of cabin trailers in the mountains. To an increasing extent they are equipped with sinks, lavatories, small bath tubs and even water-flushed toilets such as ase used on Pullman cars.

He sleeps well who knows not that he sleeps ill.—Maxim.

Tell me how a people uses its leisure and I will tell you the quality of its civilization.—Maeterlinck.

THE HISTORY OF RELAPSING FEVER IN THE UNITED STATES AND CANADA

By K. F. Meyer, Ph.D., M.D.*

In the United States and Canada relapsing fever as a definite disease entity was first recognized in the epidemic, louse-borne form among immigrants from Ireland. Small outbreaks have been reported from Philadelphia (1844 and 1871), Buffalo (1850-1851), New York (1869), Washington, Maryland, Connecticut and Boston, and Alaska (1858). A sporadic case at Worcester, Massachusetts, in 1899 was observed in an Armenian immigrant. Every historical account on American spirochaetosis lists the epidemic disease which, according to the observer, P. B. M. Miller, caused 200 deaths among the Chinese laborers at Oroville, California, as relapsing fever. Judging from the description, the malady was doubtless spotted fever or "famine typhus" in the majority of the cases. In the light of present day knowledge, it is well known that louse-borne relapsing fever not infrequently accompanies typhus. Some of the cases seen by Miller may have been true spirochaetal infections but the evidence available is by no means convincing.

After the turn of the century, the disease appeared only in sporadic cases mostly in the Southwestern and Pacific States. The 19th and 20th Biennial Report of the California State Board of Health (1906-1907) record 3 deaths presumably due to relapsing fever. In all probability, these cases were not spirochaetal in nature; the recent statistics mention in particular the fact that no deaths have been observed in California or Texas. Of interest is the fact that the first proven case, observed in 1905 by R. J. Carlisle in New York, in all probability originated from a locality (Galveston) which had only been recognized in 1930 as an endemic focus. Despite the brilliant and widely known fundamental investigations which Norris, Pappenheimer, Flournoy and subsequently Novy and Knapp conducted with the spirochaete isolated from the blood of Carlisle's case, no further cases of relapsing fever were recognized until 1915 and 1918. The spirochaeta novyi, so designated by Schellack (1907) in recognition of the studies made by F. G. Novy, has been the subject of several comparative analyses in many laboratories. Quite generally, it is acknowledged that this spirochaete is biologically different from the African and Indian species. Unfortunately, a number of laboratory infections were the result of these efforts.

With the recognition of relapsing fever as a *sporadic, autothotonic* disease confined to certain areas by

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* From the George Williams Hooper Foundation, University of California, San Francisco, California.

Meader (1915) and Waring (1918) in Colorado, and L. H. Briggs (1921) in California, the infection has attracted renewed attention. In rapid sequence, spirochaetal disease has been reported from Texas by Cormick (1927), Weller and Graham (1930), Gillespie (1935), Bohls and Schuhardt (1933), from Arizona by Bannister (1930), from California by Varden (1932 and 1934), Porter, Beck and Stevens (1932), Wynns and Beck (1935), from Nevada by G. R. Magee (1930), Meyer (1931), and Briggs (1935), from British Columbia by Palmer and Crawford (1933) and from Washington (Montana?) by Tollefsen (1935).

During the twenties the mode of transmission was the subject of diverse speculation until Weller and Graham, based on epidemiologic evidence and experimental data, clearly stigmatized the tick *Ornithodorus turicata* as one of the vectors of this disease. Their conclusions have been amply confirmed by Kemp, Moursund and Wright who have shown that this species of tick is widely distributed throughout Texas. Consequently, it is now accepted as the common vector of recurrent fever in the southwest. In fact, Brumpt has expressed the belief that all sporadic cases of relapsing fever on the North American Continent are due to the spirochaeta turicata transmitted by the turicata variety of the Ornithodorus tick. According to recent reports, he failed to transfer spirochaeta novyi using Orniothodorus turicata and therefore concludes that this strain is different from those recently found in Texas. However, it is equally possible that spirochaeta novyi lost the ability to evolve in the insect host which may have been its natural vector in 1906 when the Englishman seen by Carlisle contracted his infection. These deductions are doubtless premature as the experiences gathered in California would indicate.

Although the clinical diagnoses of the cases seen by Briggs in California and G. R. Magee at Yerington and Elko, Western Nevada, had been confirmed by the microscopic demonstration of the specific infective agent in blood smears, viable strains of the California spirochaetes were not available until July, 1931. Meyer and Eddie succeeded in transferring the organism from the blood of two patients to monkeys and rats. These and many others have been studied by George E. Coleman (1933 and 1934) and by M. D. Beck. A close biologic relationship between the Texas and California strains with the spirochaeta novyi has been demonstrated. Despite detailed and searching inquiries, no evidence relative to the nature of the vector of the disease could be secured. At first lice were suspected but since the human cases occurred only during the summer months and in certain mountainous regions, it appeared not unlikely that the infection was accidentally transferred by an insect which ordinarily feeds on animals. In view of the observations, made by Nicolle and Anderson subsequently enlarged by Clark, Dunn and Benavides, that burrowing rodents are the primary reservoirs of the spirochaetes, inquiries along these lines proved exceedingly fruitful. Miss M. D. Beck found chipmunks and tamarack squirrels to harbor spirochaetes undistinguishable from those isolated from human cases of California relapsing fever. The report by Legge on an accidental transfer of rodent spirochaetes to one of the investigators furnishes an unique confirmation of the other comparative tests.

The demonstration of the spirochaetal reservoir in the rodents led to the discovery of the vector *Ornithodorus hermsi* (1934) which lives mainly in the sandy soil of the burrows. Successful transmission of spirochaetes to monkeys and mice with ticks found in the vicinity of rodents in 1934 and then in 1935 with insects collected in the beds and cabins of patients completed the search for the vector of California relapsing fever. Furthermore, the entomological studies by Wheeler and Herms have shown that the hereditary transmission of the spirochaete to the larvae and nymphae occurs in a very small percentage of progenies, consequently a mammalian host is biologically an absolute necessity in order to prevent the disappearance of the parasite. Thus far, little information is available relative to the geographic distribution of the particular tick along the Pacific Coast. The vector involved in the Colorado, Washington, Arizona and British Columbia cases is unknown. Although squirrels have been proven to be hosts for the spirochaete, it is not unlikely that other burrowing rodents may equally act as reservoirs. Thus in Texas, Bohls and Schuhardt proved the armadillos and opossums as carriers of the parasite. Finally, it would be premature to conclude that Ornithodorus hermsi is the only vector even in California. Ornithodorus turicata has been collected in one of the regions in which relapsing fever is endemic. It will indeed be exceedingly intriguing to test the ability of the hermsi variety in the nymphal stages to transmit the various North American relapsing fever spirochaetes. The epidemiologic intelligence service has clarified the California relapsing fever problem. Protective measures may now be instituted by eliminating the nesting place within the cabins and by reducing the rodent population as a whole in the vicinity of the human habitation.

In the nature of things youth can not be aware of its latent powers.—Leon J. Richardson.

MORBIDITY

Complete Reports for Following Diseases for Week Ending August 15, 1936

Chickenpox

35 cases: Oakland 5, Fresno County 1, Beverly Hills 1, Long Beach 2, Los Angeles 4, Mill Valley 1, Fullerton 1, Sacramento County 1, Colton 1, La Mesa 2, San Diego 3, San Francisco 8, Santa Barbara County 2, Santa Barbara 1, Santa Cruz County 1, Ventura County 1.

Diphtheria

29 cases: Emeryville 1, Oakland 1, Los Angeles County 2, Glendale 1, Los Angeles 10, Napa 1, Sacramento 2, San Bernardino County 1, Colton 4, Redlands 1, San Francisco 1, Santa Barbara 2, Solano County 1, Sonoma County 1.

German Measles

16 cases: Berkeley 1, Oakland 1, Calaveras County 1, Los Angeles County 2, Long Beach 1, Los Angeles 1, Pomona 1, Santa Ana 2, Tustin 1, San Diego 1, San Francisco 1, San Joaquin County 1, Menlo Park 1, San Jose 1.

Influenza

11 cases: Long Beach 1, Los Angeles 7, San Diego County 1, Escondido 1, San Francisco 1.

Malaria

3 cases: Los Angeles 1, Yuba County 2.

Measles

64 cases: Oakland 3, Placerville 1, Fresno County 1, Coalinga 1, Kern County 1, Los Angeles County 3, Beverly Hills 1, La Verne 2, Los Angeles 9, Anaheim 4, Newport Beach 1, Placer County 1, Lincoln 1, Sacramento County 1, San Bernardino County 7, Needles 1, San Diego County 4, Coronado 1, Oceanside 1, San Diego 4, San Francisco 2, San Joaquin County 1, San Luis Obispo 1, San Mateo County 1, Santa Maria 2, Santa Clara County 6, Sonoma County 2, Santa Paula 1.

Mumps

169 cases: Albany 1, Berkeley 3, Oakland 2, Contra Costa County 2, Kern County 2, Los Angeles County 19, Alhambra 1, Beverly Hills 1, Burbank 2, Glendale 6, Glendora 2, Inglewood 2, Long Beach 3, Los Angeles 21, Pasadena 6, Pomona 2, San Gabriel 2, San Marino 1, Santa Monica 2, Madera County 1, Madera 1, Orange County 1, Anaheim 1, Brea 1, Fullerton 2, Newport Beach 4, Santa Ana 11, Placentia 1, Tustin 2, Placer County 1, San Bernardino County 1, Colton 2, San Bernardino 2, San Diego County 8, Coronado 1, Escondido 9, San Diego 17, San Francisco 1, San Joaquin County 1, San Mateo 1, Santa Barbara County 1, Santa Barbara 2, Santa Maria 1, San Jose 1, Sonoma County 1, Ventura County 2, Woodland 10, Marysville 2.

Pneumonia (Lobar).

25 cases: Albany 1, Berkeley 2, Los Angeles County 3, Burbank 1, Glendale 2, Los Angeles 9, Sacramento 1, San Diego County 2, San Francisco 2, San Luis Obispo 2.

Scarlet Fever

76 cases: Berkeley 2, Oakland 5, San Leandro 1, Fresno 1, Kern County 1, Los Angeles County 4, Compton 1, Huntington Park 1, Los Angeles 8, Hawthorne 1, South Gate 1, Monterey Park 2, Merced 1, Orange County 1, Huntington Beach 1, Placer County 1, Sacramento County 1, Sacramento 8, North Sacramento 2, San Bernardino County 2, Colton 1, San Diego 5, San Francisco 11, Daly City 1, Lompoc 1, Santa Clara County 3, Gilroy 1, San Jose 1, Santa Cruz County 1, Santa Cruz 1, Sonoma County 1, Santa Rosa 1, Exeter 1, Ventura County 1, Fillmore 1.

Smallpox

2 cases: Riverside County 1, San Luis Obispo 1.

Typhoid Fever

23 cases: Alameda County 1, Imperial County 2, Kern County 5, Los Angeles County 1, Los Angeles 1, Pasadena 1, Sacramento County 1, San Bernardino County 5, San Diego 2, San Luis Obispo County 2, Ventura County 1, Oxnard 1.

Whooping Cough

221 cases: Alameda 1, Albany 3, Berkeley 2, Oakland 11, San Leandro 6, Colusa 1, Kern County 2, Los Angeles County 28, Beverly Hills 2, Burbank 1, Culver City 1, Glendale 1, Los Angeles 41, Monrovia 1, Pasadena 6, Santa Monica 1, Torrance 2, Monterey Park 1, Merced County 1, Monterey County 4, Orange County 1, Fullerton 4, Santa Ana 17, Corona 2, Sacramento 22, San Bernardino County 7, Colton 1, San Diego County 8, El Cajon 1, National City 2, San Diego 8, San Francisco 11, San Joaquin County 8, Lodi 1, Stockton 1, Santa Barbara 5, San Jose 2, Santa Cruz County 2, Ventura County 1, Yolo County 1.

Anthrax

One case: Merced County.

Meningitis (Epidemic)

4 cases: Contra Costa County 1, Lassen County 1, Los Angeles 1, Torrance 1.

Dystentery (Amoebic)

6 cases: Los Angeles 1, Pasadena 1, Hawthorne 1, Colton 2, Oxnard 1.

Dysentery (Bacillary)

3 cases: Los Angeles.

Leprosy

One case: Santa Barbara.

Pellagra

One case: Pasadena

Poliomyelitis

8 cases: Fresno County 1, Kern County 1, Arcadia 1, Long Beach 1, Los Angeles 1, Monterey 1, Huntington Beach 1, Tulare County 1.

Tetanus

One case: San Gabriel.

Trachoma

3 cases: Riverside County 2, San Francisco 1.

Encephalitis (Epidemic)

2 cases: Albany 1, Vallejo 1.

Paratyphoid Fever

One case: San Jose

Food Poisoning

3 cases: San Mateo County.

Undulant Fever

3 cases: Los Angeles County 1, Long Beach 1, Sacramento County 1.

Tularemia

One case: Kern County.

Coccidioidal Granuloma

One case: Kern County.

Septic Sore Throat (Epidemic)

2 cases: Madera County 1, La Mesa 1.

Rabies (Animal)

13 cases: Los Angeles County 6, Glendale 1, Huntington Park 2, Long Beach 2, Madera 1, San Bernardino 1.

He is an eloquent man who can treat humble subjects with delicacy, lofty things impressively and moderate things temperately.—Cicero.

Knowledge is power; the exercise of a self-developed skill is joy; and these are the parents of enthusiasm, which can ward off "the slings and arrows of outrageous fortune," and conquer the world.—*Clinical Medicine and Surgery*, December, 1934.

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